

Notice of Allowability

Application No.

09/937,810

Examiner

Ling-Siu Choi

Applicant(s)

ALBRECHT ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to the Amendment filed February 6, 2004.
2. ☐ The allowed claim(s) is/are 19-38.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Art Unit: 1713

DETAILED ACTION

1. This Office Action is in response to the Amendment and the Declaration, both being filing February 6, 2004. Claims 1-18 were canceled and claims 19-38 are now pending.

Allowable Subject Matter

2. Claims 19-38 are allowed.

3. The following is an examiner's statement of reasons for allowance:

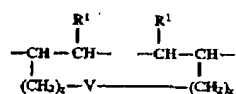
The present claims are allowable over the closest references: Albrecht et al. (US 5,798,425).

The present invention relates to a copolymer based on radicals of unsaturated monocarboxylic or dicarboxylic acid derivatives and oxyalkylene glycol alkenyl ether, comprising

(a)	from 51 to 95 mol%	$\begin{array}{c} \text{COX} \\ \\ \text{---CH}_2\text{---CR'---} \\ \\ \text{COX} \end{array} \quad \begin{array}{c} \text{COX} \\ \\ \text{---CH}_2\text{---C---} \\ \\ \text{CH}_2 \\ \\ \text{COX} \end{array} \quad \begin{array}{c} \\ \text{---CH}_2\text{---C---CH}_2 \\ \quad \quad \\ \text{O=C} \quad \text{C=O} \\ \quad \quad \backslash \quad / \\ \quad \quad \text{Y} \end{array}$
(b)	from 1 to 48.9 mol%	$\text{---CH}_2\text{---CR}^3\text{---} \\ \\ (\text{CH}_2)_p\text{---O---(C}_m\text{H}_{2m}\text{O)}_n\text{---R}^2$
(c)	from 0.1 to 5 mol%	$\begin{array}{c} \text{R}^4 \\ \\ \text{---CH---C---} \\ \quad \\ \text{S} \quad \text{T} \end{array} \quad \begin{array}{c} \text{R}^2 \quad \quad \text{R}^3 \\ \quad \quad \\ \text{---CH---CH---CH---CH---} \\ \quad \quad \quad \quad \quad \\ (\text{CH}_2)_z \quad \text{---V---} \quad (\text{CH}_2)_z \end{array}$
(d)	from 0 to 47.9 mol%	$\begin{array}{c} \text{---CH---CH---} \\ \quad \quad \\ \text{COO}_2\text{M} \quad \text{COX} \end{array} \quad \begin{array}{c} \text{---CH---CH---} \\ \quad \quad \\ \text{O=C} \quad \text{C=O} \\ \quad \quad \backslash \quad / \\ \quad \quad \text{Y} \end{array}$

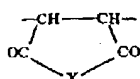
(summary of claim 1)

Albrecht et al. disclose a copolymer based on oxyalkyleneglycol-alkenyl ether and unsaturated dicarboxylic acid derivatives, comprising (a) an acrylic acid [up to 50 mol % of the sum of components (b), (c), and (d)]; (b) 1 to 89 mol % of component in the general formula of $\text{---CH}_2\text{---CR}^3\text{---}[(\text{CH}_2)_p\text{---O---(C}_m\text{H}_{2m}\text{O)}_n\text{---R}^2]$; (c) 0.1 to 10 mol % of component in the general formula of $\text{---CHS---CR}^4\text{T---}$ or



and (d) 10 to 90 mol% of component in the

formula of $\text{---CH(COO}_m\text{)}\text{---CHCOX---}$ or



(Claims 1, 6, and 8).

Art Unit: 1713

However, Albrecht et al. do not teach or fairly suggest a copolymer comprising more than 50 mol % acrylic acid. Furthermore, the Declaration of Gerhard Albrecht shows that the use of acrylic acid higher than 50 mol % in standard mortar, transport concrete, or finished concrete results in better product properties:

	properties	US 5,798,425	1 (invention)	2 (invention)
mortar	air content (vol %)	3.9	3	3.1
transport concrete		2.4	2	1.9
finished concrete		1.9	1.2	1.5
transport concrete	compressive strength after 24 h (MPa)	12.2	15.0	15.8
finished concrete		38.4	42.8	44.0
mortar	slump (cm)	23.8	28.5	30.8
transport concrete	slump (10 min)	55.5	62.3	67.8
	slump (40 min)	50.0	59.8	60.3
finished concrete	slump (10 min)	53.0	59.8	61.5
	slump (40 min)	47.8	56.0	58.8

Art Unit: 1713

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

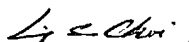
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is (703)305-0887.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on (703)308-2450.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703)308-2351.



Ling -Siu Choi

March 28, 2004